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USE OF INNOVATIVE TECHNOLOGIES IN TEACHING PHYSICS

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A B S T R A C T

This article aims to achieve effective results in a short time without spending too much mental and physical effort in the organization of modern education, different from traditional education. In this case, in the process of teaching physics, only the necessary information is selected and the volume of information is quantitatively measured in accordance with the student's learning abilities. For this, using innovative technologies, improving the quality of physics lessons in general education schools, making students interested in lessons, creative research and independent work, and forming the skills of working in mutual cooperation are mentioned.

K E Y W O R D S

non-traditional lesson, innovative technology, media, interactive, leader, exhibition tools.

Introduction

Modern lessons are necessary to kindle the embers in the student's heart, develop it in every way, and lead it from knowledge to knowledge.

One of the urgent problems facing physics teachers today is the design of modern educational technologies and their application in teaching practice. A physics teacher should not only provide students with the necessary knowledge of physics, but should be able to arouse interest in science in them, so that as result, good specialists and mature personnel in this field will be produced.

Each lesson taught by the teacher should be different from other lessons, today's lesson should be perfect compared to yesterdays.

New pedagogical technologies for the lesson:

– using the media;
– with the help of exhibition tools;
– by using interactive methods;

and others, this lesson will reach the student's mind and take a place in his memory. The student's scientific outlook expands and the level of knowledge increases.

The goal of organizing modern education, different from traditional education, is to achieve effective results in a short time without spending too much mental and physical effort. To deliver specific theoretical knowledge to students in a short period of time, to create skills and qualifications in them in relation to certain activities, as well as to control the activities and knowledge of students, to evaluate their knowledge, skills and qualifications from a physics teacher requires great pedagogical skills and a new approach to the educational process.

Currently, many developed countries of the world have accumulated a lot of experience in using new pedagogical technologies that increase the scientific activity and creativity of students and at the same time guarantee the effectiveness of the educational process. The methods that make up the basis of this experience are called interactive methods, and knowing how to apply these methods to the teaching process is a high task assigned to the physics teacher of today.

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Determining the specific purpose of education in each lesson is considered one of the important conditions in the design of teaching technology. In this, the diagnostic purpose of teaching on science topics is determined.

From the time when physics became a science, the database of the science has been increasing in size, and it is getting rich every year at a high speed.

For this reason, in the process of passing physics, it is necessary to select only the necessary information and to reduce the amount of information to a quantitative size in accordance with the student's learning abilities.

Application of "ZIG-ZAG" STRATEGY (method) in teaching physics.

The introduction of new pedagogical technologies into the educational process is one of the modern requirements, which requires pedagogical staff and teachers to continuously work on themselves.

The use of new pedagogical technologies in the teaching of physics, as in other subjects, gives good results. One of these methods is the "Zig-zag" method. When using this method, each of the participants of the training works as a discussion participant, listener, and speaker for a short period of time.

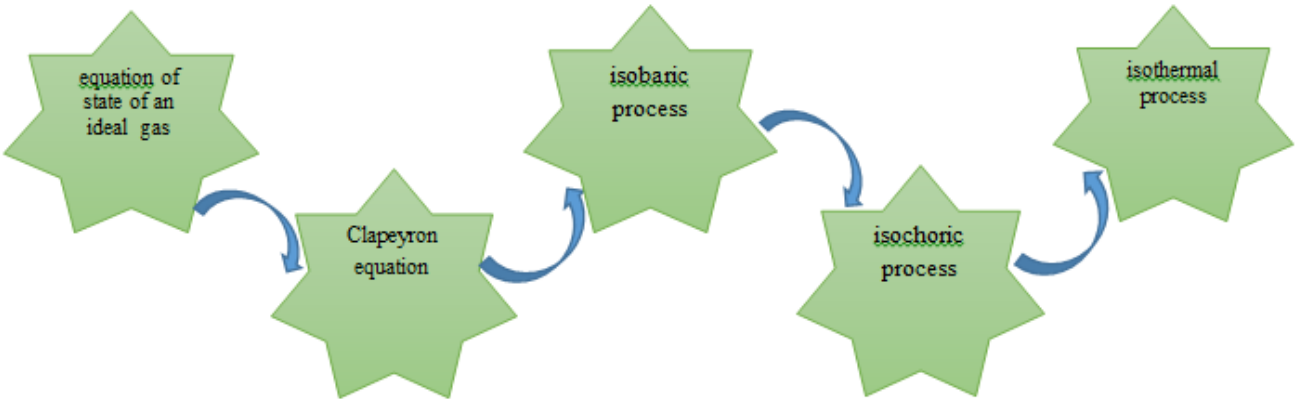
"Zig-zag" strategy serves to work with students on a group basis, to master the subject quickly and thoroughly. The use of this method in the educational process requires the teacher to be very active and possess pedagogical skills. In this case, teachers should be able to form groups in such a way that in each group there is a proper distribution of active and slow learning students. When groups are formed incorrectly, students can waste time without being able to solve the problem.

After the students take their seats, the teacher announces the topic.

Topic: Equations of state of an ideal gas. Iso process.

The teacher briefly touches on this topic and explains it. Students are divided into several (5-7) groups. The text explaining the essence of the new topic is divided into 5-7 parts accordingly. Each group is given a specific part of the topic (text 1, text 2, ...) and is assigned the task of studying it. Students

work on the text in groups during the given time, and in they tell order to save time, leaders are chosen from among the group members, and the main information about the studied text to their teammates. The opinion of the leaders can be supplemented by the members of the group. After all the groups have thoroughly mastered the text given to them, the texts are exchanged among the groups, and the above activity is repeated at this stage as well. In this context, students will learn a whole text that illuminates the essence of the topic.



At the end of the lesson, the teacher gives his feedback. Advanced and active students are encouraged. In conclusion, using new pedagogical technologies, the following:
- creation of a healthy competitive environment among students;
- mutual cooperation;
- listening to each other;
- understanding one's mistake;
- increased interest in science;
- creative research and other such positive results are achieved.

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